

Abstract

The last two decades, considerable research has been intrigued by the study of teacher efficacy and its influence on students' motivation and achievement. Studies have indicated that teacher efficacy influences teachers' effort to encounter classroom difficulties and the academic performances of students (Fackler & Malmberg, 2016). Since most authors use a pedagogical or psychological approach to investigate the concept of teacher efficacy, there is a lack of sociological research that handles this concept. A more sociological view can be clarifying as it is known that the school context affects both teachers and students (Fackler & Malmberg, 2016; Goddard & Goddard, 2001; Knoblauch & Hoy, 2008; Skaalvik & Skaalvik, 2017). Through pedagogical and psychological research, we know which teacher characteristics affect teacher efficacy, nevertheless, classroom or school characteristics are largely overlooked in studies on teacher efficacy (Knoblauch & Hoy, 2008; Labone, 2004; Yoon, 2002). Yet, school characteristics are easier to alter than teacher characteristics. Knoblauch and Hoy (2008) report that teachers' sense of efficacy is not uniform across school settings. For example, teachers can feel more efficacious in calm, rural schools and less efficacious in dense urban schools (Knoblauch & Hoy, 2008). Fackler and Malmberg (2016) confirm that in teacher efficacy research, most of the unexplained variance is between schools. Those differences between schools are still a 'black box' and research concerning teacher efficacy is urging for more studies that include school characteristics. Goddard and Goddard (2001) believe that it is important to understand the relationship between several school contextual variables and teacher efficacy. So far, very few studies concerning teacher outcomes include external obstacles, such as the socioeconomic student composition of the school (Fackler & Malmberg, 2016; Van Houtte, 2011). Those contextual factors, and possible effects on teacher efficacy, obviously need further research.

We already know that students are affected in several ways by the socioeconomic composition of the school (Sellström & Bremberg, 2006; Van Eycken, 2018), but we know little about how this composition can affect teachers and their self-efficacy. The socioeconomic composition seems a possible predictor of teacher efficacy in a few studies (Auwarter & Aruguete, 2008), where teachers in schools with a high proportion of low-SES students score lower on self-efficacy. The ethnic diversity of schools affects teacher efficacy as well, since teachers experience a more diverse classroom as more demanding (Knoblauch & Hoy, 2008). Other studies suggest that gender (composition) matters since low-efficacy feelings appear when teaching, especially, low-SES boys (Auwarter & Aruguete, 2008). Teaching mostly low-SES students has a negative effect on teacher

efficacy and the effect will be even stronger when teaching mainly low-SES boys. Auwarter and Aruguete (2008) suggest an interaction between gender composition and socioeconomic composition for teachers' sense of efficacy, and an interaction between socioeconomic composition and the individual SES of the teacher for their sense of efficacy as well, however, they only tested this for teacher expectations.

Since not many studies have encountered compositional effects to analyze teacher efficacy, scholars are increasingly urging for more focus on composition, such as schools' socioeconomic student composition and gender composition (Fackler & Malmberg, 2016). Moreover, teacher outcomes are often overlooked in research concerning effects of school composition (Van Houtte, 2011). In response to this gap, this study will combine individual teacher characteristics and school characteristics based on aggregated student characteristics. This study will focus on the effect of the socioeconomic student composition and gender composition on teacher efficacy, controlling for ethnic composition of the school. To reveal the influence of those contextual factors, a multilevel approach will be used.

Methods

The used data are part of the 'Teaching in the Bed of Procrustes' project, which were gathered in the school year 2012-2013 and 2013-2014, based on surveys that were taken in seventh grade of secondary schools (students and teachers). A sample of 59 schools participated, representative of Flemish secondary schools with a response rate of 47.6%. The schools are representative of the Flemish context (Van Maele et al., 2015). The project aspired to follow the students through the seventh and eighth grade, so three waves of data gathering were planned. This study will use the first wave, as it is the most complete one. In this first wave, 1247 teachers participated. This implies a response rate of 69.5%. A total of 6380 students filled out the questionnaire (response rate of 96.6%). The study design guaranteed data from students from various backgrounds, and from several regions, making these data representative for 12-13-year-olds in Flanders (Van Houtte, 2016). The data are a clustered sample, teachers nested within schools, which warrants a multilevel analysis (Hox, Moerbeek, & van de Schoot, 2018). Teacher efficacy consists out of three dimensions: teacher efficacy for instructional strategies (1), classroom management (2) and student engagement (3). Each model is generated for every dimension of teacher efficacy and general teacher efficacy. First, an unconditional nullmodel is estimated to determine school-level variance in teacher efficacy. In the next model, the socioeconomic composition is added as it is the main focus of this study. Then ethnic composition and gender composition are included at the school level. The variables

socioeconomic composition and ethnic composition are simultaneously integrated to investigate the net effects of those two variables. At the teacher level, years of experience, SES, job satisfaction, workload, stress, perceived leadership and gender are added in the next model. The last two models are testing the possible interaction effects. Firstly, the interaction between socioeconomic composition and gender composition was added. Subsequently, the interaction between socioeconomic composition and the individual SES of the teacher was analyzed. All metric variables were grand mean centered.

Conclusions

We demonstrate that teacher efficacy is mainly unaffected by the school context, as little variance exists between schools. This contradicts findings of limited previous studies that reported that most of the unexplained variance exists between schools. We hypothesized that the socioeconomic composition influences teacher efficacy, and that therefore teachers in schools with mainly high-SES students feel more efficacious. Our analysis shows that this hypothesis can be rejected. This was unexpected as the socioeconomic composition has been an important predictor of various teacher outcomes (Rumberger & Palardy, 2005). However, the gender composition of the school affects teacher efficacy for classroom management. Teachers score lower on this dimension in schools with mostly girls. This contradicts the hypothesis that teachers feel more efficacious in schools with mainly girls. We could link the result to the social learning theory of Bandura (1997): *“mastery of difficult tasks heightens feelings of efficacy”*. When teachers can handle more demanding situations, this may boost their sense of efficacy. In schools with mostly girls, this more demanding context is not present and does not induce this boost of efficacy. Moreover, the more girls there are at school, the more that students are trusted (Van Houtte, 2007). This could be a possible explanation why teachers feel less efficacious in such schools, since schools with mostly girls are less demanding. Obviously this needs to be investigated further. Furthermore, we expected two interaction effects. We analyzed a moderation of the teachers' SES on the effect of socioeconomic composition and another moderation of gender composition on the effect of socioeconomic composition. Yet, no such effects were found. This study may trigger more attention to gender composition of schools and teacher efficacy, since teacher efficacy affect students' motivation and achievement, while teachers feel more efficacious for classroom management when teaching boys.

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